

## Uplift response of square anchor plates in dense sand

### Abstract:

The behavior of square anchor plates during vertical pullout was studied by experimental data and finite element analyses in dense sand. Validation of the analysis model was also carried out with 100 mm x 100 mm square plates in dense sand. Agreement between the uplift capacities from the experimental tests and finite element modeling using PLAXIS 2D, based on 0.2 m computed maximum displacements was excellent for square anchor plates. Numerical analysis using square anchor plates was conducted based on hardening soil model. The research showed that the finite element results were lower than the experimental findings in the dense sand.